

CLAIMS

[1] A pipe joint construction comprising an elastic seal member for hermetically sealing between an inner circumferential surface of a receiving pipe section and an outer circumferential surface of an inserted pipe section inserted into and connected to the receiving pipe section in a pipe axis direction, and a lock member provided in the inner circumferential surface of the receiving pipe section adjacent a receiving opening thereof for preventing separating movement of the pipe sections by contacting an engaging projection protruding from the outer circumferential surface of the inserted pipe section in the pipe axis direction,

wherein the construction further comprises an attachment/detachment control device for attaching and detaching the lock member to/from the receiving pipe section by rotating the lock member about the pipe axis direction relative to the receiving pipe section and by moving, in the pipe axis direction, the lock member placed in a specific position in a passage of rotation.

[2] A pipe joint construction as defined in Claim 1, further comprising a stopper wall portion formed in the inner circumferential surface of the receiving pipe section at a portion close to the receiving opening from a seal mounting groove for receiving the elastic seal member to contact an engaging projection protruding from the outer circumferential surface of the inserted pipe section in the pipe axis direction, thereby to limit a maximum contracting position between the pipe sections.

[3] A pipe joint construction as defined in Claim 1, wherein the attachment/detachment control device includes a plurality of circumferentially divided control members insertable and removable in the pipe axis direction through a space between the outer circumferential

surface of the inserted pipe section and the inner circumferential surface of the receiving pipe section, and a plurality of circumferentially extending split lock pieces forming the lock member and dispersedly formed on the control members, and the receiving pipe section includes, formed adjacent a receiving opening end thereof, attachment/detachment recesses for allowing insertion and removal of the split lock pieces in the pipe axis direction, and retainer wall portions for contacting the split lock pieces in the pipe axis direction when the split lock pieces inserted through the attachment/detachment recesses are rotated about the pipe axis direction to a predetermined attachment position thereby to prevent disengaging movement of the lock pieces.

[4] A pipe joint construction as defined in Claim 3, wherein the split lock pieces are formed on outer circumferential surfaces of the control members as engaging portions larger than an inner diameter of the receiving opening of the receiving pipe section.

[5] A pipe joint construction as defined in Claim 3, wherein the control members include flange portions formed at outward end portions thereof for closing or substantially closing an annular space between the inner circumferential surface of the receiving pipe section and the outer circumferential surface of the inserted pipe section.

[6] A pipe joint construction as defined in Claim 3, wherein each control member has a control pinching portion formed on an outward end portion thereof.

[7] A pipe joint construction as defined in Claim 3, wherein each control member includes a pair of semicylindrical elements to be fitted along the outer circumferential surface of the inserted pipe section.

[8] A pipe joint construction as defined in Claim 3, wherein the control members and the split lock pieces have a circumferential width to pass through the attachment/detachment recesses in the receiving pipe section, and wherein space limiting members made of a synthetic resin are disposed between adjacent control members inserted into the receiving pipe section through the attachment/detachment recesses to have a circumferential width to pass through the attachment/detachment recesses in the receiving pipe section in the pipe axis direction.

[9] A pipe joint construction as defined in Claim 3, further comprising a return preventive device provided for receiving the split lock pieces in positions advanced on the removing side in the pipe axis direction in the rotating operation passage when the split lock pieces inserted into the receiving pipe section are rotated along the rotating operation passage, and for preventing or restraining a relative rotation of the split lock pieces in a receiving position toward the specific attachment/detachment operating position.

[10] A pipe joint construction as defined in Claim 9, wherein the return preventive device includes recesses formed in the split lock pieces into which part of the receiving pipe section is relatively engageable in the pipe axis direction in the predetermined attachment position of the rotating operation passage.

[11] A pipe joint construction as defined in Claim 9 or 10, further comprising an urging device provided for moving and urging the split lock pieces to the receiving position of the return preventive device.